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Subject: Response to Request for Information: Public Access to Peer-Reviewed Scholarly Publications

Resulting From Federally Funded Research

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Response to Request for Information: Public Access to Peer-Reviewed Scholarly Publications Resulting From Federally Funded Research

(1) Are there steps that agencies could take to grow existing and new markets related to the access and analysis of peer-reviewed publications that result from federally funded scientific research? How can policies for archiving publications and making them publicly accessible be used to grow the economy and improve the productivity of the scientific enterprise? What are the relative costs and benefits of such policies? What type of access to these publications is required to maximize U.S. economic growth and improve the productivity of the American scientific enterprise?

Yes. All federal agencies that provide research support should require that the authors of any peer-reviewed publications that result from federally funded scientific research should deposit a copy of their post-peer-reviewed manuscript with a designated federal repository and that the author ensure that he or she has the legal authority to grant a copyright license to the federal agency to make the publications freely available over the Internet. Moreover, federal policy should require that the author(s) of such publications retain sufficient rights to grant the public a license to liberally reuse such publications; such license grant taking place no later than 24 months after the date of publication.

It is important to recognize how poor a fit copyright law is for scholarly publishing. Copyright is an author's right. The law grants these rights on the assumption that authors desire legal control over reuse in order to trade this control for remuneration. However, the authors of research articles reporting the results of scientific research do not depend upon the copyright incentive to produce these articles. As a consequence, public access to all scientific

research should not await the expiration of the automatic copyright term of life of the author plus 70 years before this research is made freely available to the public. Where public funds have been used to conduct the research and produce the articles reporting and interpreting the results, the argument for public access in the short term is even more compelling.

All agencies should require open access to peer-reviewed publications that result from federally funded research. At this point, federally operated central repositories are the best tool to serve this end. Federally operated repositories serve the interests of preservation and access that extend beyond the interests of commercial publishers. In addition to preservation, centralization and standardization in federally operated repositories provide the opportunity for novel uses, including the development of machine-aided research. Finally, the use of central, federally operated repositories provides the opportunity for historical data collection on document use, providing both a stronger understanding of the benefit of federal research funding, as well as data for analysis of research methodology.

The use of standardized, open formats, such as XML, improves usability of data, expanding both the speed at which we can make discoveries, but also increasing the ways that information can be accessed.

This standardized access enables machine-aided research and machine aided decision-making, increasing the productive capacities of the United States' innovation-based industries. Effective public access to the research literature also fuels innovation in the building of next generation machine aided discovery and analysis tools central to technology industry growth.

Toward this end, federal policies should address access and terms of reuse. Guidelines for both access and reuse should be as open and free as possible to widen the scope of potential innovation. There is huge value in building enough capacity and flexibility to enable tomorrow's unanticipated technological uses, not just those available today.

Science and technology education in high schools and community colleges also benefits from strong open access policies by providing the tools for students and teachers to engage in current science. The creation of strong science and technology students is crucial for continued job creation.

(2) What specific steps can be taken to protect the intellectual property interests of publishers, scientists, Federal agencies, and other stakeholders involved with the publication and dissemination of peer-reviewed scholarly publications resulting from federally funded scientific research? Conversely, are there policies that should not be adopted with respect to public access to peer-reviewed scholarly publications so as not to undermine any intellectual property rights of publishers, scientists, Federal agencies, and other stakeholders?

Copyright is an author's right, vesting in the author at the time of creation and fixation in a tangible medium. Publishers do not employ investigators who conduct research nor do they finance scientific research nor do they compensate those who provide peer review services as an indirectly federally-subsidized professional service. With all due respect, the question is potentially misleading because publishers do not have intellectual property rights in scholarly publications that could be "undermined." Instead, these rights are authors' rights, and publishers only get intellectual property rights in scholarly publication through a transfer of rights under copyright by the federally-supported author of the copyrighted work.

Any policy requiring that the author(s) of federally-subsidized copyrighted work agree to grant the agency a copyright license ensuring that it may provide access and reuse rights to the public does not undermine any intellectual property rights of the publisher. Rather, this agreement between funding agency and author precedes any interest that the publisher may have in the copyrighted work. Publishers remain free to refuse to accept for publication federally funded articles with these conditions. If they choose to publish such articles, as biomedical publishers have done in response to the NIH Public Access Policy, they do so knowingly and with full consent to the terms and conditions to which the author has agreed in exchange for the federal support that enabled the article to be produced in the first place. As a result, federal policies that require that federally-funded researchers grant federal agencies a copyright license to scholarly articles emerging from such support are fully consistent with the basic policy that copyright is an author's right and can in no way "undermine" any rights owned by a publisher because such rights would have been acquired with full knowledge of the terms and conditions to which the author(s) agreed with the funding agency.

By requiring that the author manage copyright in a way that ensures legal public access and reuse rights through a federal repository, federal agencies are merely joining the large group of those who fund the creation of works of authorship and routinely demand terms and conditions on the distribution of those works of authorship. Where they are created by public funds, those terms and conditions should include deposit in an open access archive, including a grant of rights of reuse by the author or copyright holder a reasonable time after publication, such as 12-24 months.

With respect to the mechanics of how federal agencies receive their copyright license from federally-subsidized authors, it is very important for the White House to support NIH's view that the longstanding copyright license granted to the federal agencies under the terms of OMB Circular A-110 and similar regulations provides the legal basis for providing online access to scholarly articles. NIH chose to require the grant of a second copyright license at the time of submission, but as a legal matter this was entirely unnecessary. *See attached* Michael Carroll, Complying with the NIH Public Access Policy - Copyright Considerations and Options, *available online at*: www.arl.org/sparc/bm~doc/NIH_Copyright_v1.pdf

(3) What are the pros and cons of centralized and decentralized approaches to managing public access to peer-reviewed scholarly publications that result from federally funded research in terms of interoperability, search, development of analytic tools, and other scientific and commercial opportunities? Are there reasons why a Federal agency (or agencies) should maintain custody of all published content, and are there ways that the government can ensure long-term stewardship if content is distributed across multiple private sources?

There are at least three distinct advantages to centralized federally operated repositories.

Search capabilities are increased in a central, standardized database. Incomplete interoperability of commercial databases with library search functions and incomplete holdings are a barrier to scientific innovation. Having a centralized search capability both increases the value of search results, and also enables the creation and continued development of powerful search tools. Centralized search also aids the linkage of scientific discoveries across disciplines when unanticipated results are found from other fields.

Standardization increases the ability to use the information for machine aided research and machine aided decision-making. This not only speeds the rate of discovery in established scientific disciplines but also provides a corpus of high-value information for the development of machine-aided discovery and analysis tools in developing disciplines and for non-research use.

Finally, a centralized repository can act as a powerful data-gathering tool for data about the research products being used. This data can improve Federal allocation of research funding, improve the mechanics and understanding of the usability of scholarly articles, and provide insight into the research methodologies of different user groups.

(4) Are there models or new ideas for public-private partnerships that take advantage of existing publisher archives and encourage innovation in accessibility and interoperability, while ensuring long-term stewardship of the results of federally funded research?

Publishers should adopt open standards for their archives. Interoperability with government archives should be a feature that users demand from publisher repositories for the most powerful search results and the highest value for subscription dollars spent. Central federal repositories can serve as educators and standard-setters for search interoperability.

(5) What steps can be taken by Federal agencies, publishers, and/or scholarly and professional societies to encourage interoperable search, discovery, and analysis capacity across disciplines and archives? What are the minimum core metadata for scholarly publications that must be made available to the public to allow such capabilities? How should Federal agencies make certain that such minimum core metadata associated with peer-reviewed publications resulting from federally funded scientific research are publicly available to ensure that these publications can be easily found and linked to Federal science funding?

The benefit to a central, federally operated repository would include the centralized authority for establishing metadata guidelines and ensuring consistent applications across scholarly fields.

(6) How can Federal agencies that fund science maximize the benefit of public access policies to U.S. taxpayers, and their investment in the peer-reviewed literature, while minimizing burden and costs for stakeholders, including awardee institutions, scientists, publishers, Federal agencies, and libraries?

Benefits are maximized and costs are minimized if Federal agencies have strong open access policies that are consistently, and vigorously, enforced. A blanket policy for all executive agencies would foster a single well-understood and streamlined process for all peer-reviewed articles that are funded in whole or in part by Federal agencies. If the deposit in a central Federal repository is a standard part of publication, it will become an efficient, even automated, part of the publication process with little administrative burden or cost. The broader and more consistent the open access scheme, the greater the benefit accrued to the public and the least administrative cost per article submitted. Instead, it is the current patchwork of policies that increases cost and administrative burden, while limiting the public benefit.

(7) Besides scholarly journal articles, should other types of peer-reviewed publications resulting from federally funded research, such as book chapters and conference proceedings, be covered by these public access policies?

Yes, because copyright is an author's right, not one associated primarily or exclusively with the publisher. Any research result for which the author was paid in whole or in part through federal funds should be made publicly accessible. This includes, for example, book chapters on federally funded research.

(8) What is the appropriate embargo period after publication before the public is granted free access to the full content of peer-reviewed scholarly publications resulting from federally funded research? Please describe the empirical basis for the recommended embargo period. Analyses that weigh public and private benefits and account for external market factors, such as competition, price changes, library budgets, and other factors, will be particularly useful. Are there evidence-based arguments that can be made that the delay period should be different for specific disciplines or types of publications?

For there to be an "embargo", there must first be a deposit of the embargoed article. Consequently, federal policy should require that federally-funded researchers deposit copies of their articles, as modified in response to peer review, immediately upon completion. If public access should be limited, this embargo period should last no later than 6 months after the date of publication. Additionally, rights for reuse should be provided on a standardized timeline, no later than 12-24 months from the date of publication.